

I CLAIM

1. A display rack for holding a matrixical arrangement of groupings of boxed items and for minimizing simultaneous removal of multiple of the boxed items in combination with a plurality of the boxed items, the boxed items having a thickness and a height, the rack comprising:

a plurality of vertically stacked shelves, each shelf sized for receiving a row of pocket modules thereon, each shelf that is above a lower shelf offset rearwardly from said lower shelf;

a plurality of pocket modules positioned on the shelves in a matrixical arrangement, each pocket module formed of clear plastic sheet material and having two side portions, a front portion, and a back pusher portion, all integral with one another, all having a uniform thickness and all defining a pocket for receiving a grouping of product, the pusher portion having a spring portion that when deflected rearwardly by a product grouping in said pocket provides a forward bias acting on said grouping;

a plurality of the polyhedron shaped products arranged in grouping in a plurality of the pocket modules, each grouping having a forwardmost product; and

the pocket modules and vertically stacked shelves arranged such that only the forwardmost product in each grouping can be raised and removed vertically from each respective pocket.

2. The combination of claim 1, wherein each shelf is G-shaped and comprises a top portion and a pair of integral bosses defining a horizontal slot open downwardly, the slot sized to fit and engage with the top portion of a shelf immediately therebelow.

3. The combination of claim 1, further comprising at least one side panel, and wherein each shelf comprises at least one fastener portion, and wherein the at least one side panel is positioned upright adjacent to the stack of upright shelves and the display system further comprises a plurality of fasteners attaching the panel to the stack of upright shelves.

4. The combination of claim 3, wherein at least one boss is configured as a screw opening, wherein the at least one side panel has a plurality of holes, wherein the fasteners comprise a plurality of screws, wherein the at least one fastener portion has a screw hole, and wherein the side panel is attached to the stack of upright shelves by way of the screws extending through the side panel into the screw hole.
5. The combination of claim 1, wherein the pocket module is formed of a sheet of PETG with a thickness in the range of .020 to .200 inches.
6. The combination of claim 1, wherein the shelves have a vertical spacing therebetween, and the height of the product is less than the vertical spacing.
7. The combination of claim 1, wherein each pocket module further comprises an integral front wall portion, and a backwall portion extending between the sidewall portions and wherein the pusher portion extends at an angle between 0 and 90 degrees from said backwall portion.
8. The combination of claim 1, wherein each pocket module, wherein each group of like shaped products has a frontal surface area, and whereby at least 80 % of the frontal surface area of each grouping is visible from the front of the display.
9. The combination of claim 10, wherein each pocket module has an integral front wall at the front side of each of said pocket module and wherein the removal zone is constrained by said front wall whereby each of said like shaped products can be inserted and removed only in a substantially vertical direction from said pocket volume and wherein the pocket volume has a most forward position and wherein only the like shaped product in the most forward position may be removed.
10. A display in combination with a backwardly extending aligned grouping of a plurality of like shaped products, the display comprising a plastic pocket module having a front side, a back side, a left side, a right side, a top, and a bottom, the pocket module comprising a pair of sidewall

portions located at the left side and right side respectively, a portion extending between the sidewall portions, a pusher portion extending from the back side forwardly to substantially the front side to position the grouping against the front side of the pocket module, the pusher portion having a product piece engagement portion and a spring portion whereby when the product piece engagement portion is displaceable rearwardly, a forward bias is provided to the product grouping portion by the spring portion, and wherein the sidewall portions, the portion extending between the sidewall portions, and the pusher portion are all integral and formed of plastic.

11. The display of claim 10 wherein the module is formed of transparent plastic.

12. The display of claim 10 wherein the portion extending between the sidewalls comprises a backwall portion that is substantially planar at the back side and the spring portion is substantially planar and extends at an angle from the backwall portion.

13. The display in combination with a backwardly extending aligned grouping of a plurality of like shaped products of claim 10 further comprising a rack of horizontal supports in an upright stack and further comprising a plurality of said pocket modules, each horizontal support supporting a row of said pocket modules, each pocket module having a pocket area for storing a grouping of a plurality of like shaped products and an access and removal zone for insertion and removal of said grouping of like shaped products, and wherein each of said access and removal zones is constrained by the respective pocket module and a horizontal support.

14. The display in combination with a backwardly extending aligned grouping of a plurality of like shaped products of claim 13 wherein each horizontal support is G-shaped in the cross-section, and each of the stack of horizontal supports is engaged with an adjacent horizontal support.

15. A method of manufacturing a display for displaying and dispensing a plurality of groupings arranged in a matrix of product pieces, each grouping comprising a plurality of aligned product pieces extending rearwardly, the method comprising the steps of:

shaping a plurality of planar cut out portions of rigid plastic sheet material, each cut out portion providing for a pair of sidewall portions, a portion for extending between the sidewall portions, and a pusher portion;

heating and bending each of the cut-out portions thereby forming a unitary pocket module defining an interior pocket volume and having a front side, a back side, a left side, a right side, a sidewall portion positioned at the left side, a sidewall portion positioned at the right side, a portion extending between the sidewalls, and a pusher portion extending from the back side forwardly to substantially the front side, the pusher portion retractable to the back side;

constructing a rack of horizontal supports with each horizontal support having a row of said pocket modules;

arranging a plurality of said pocket module in a row on each shelf whereby each module is in contact with an adjacent module, and

constraining access to each pocket volume of each pocket module whereby only a single product piece of a grouping can be removed at a time from the pocket volume.

16. The method of claim 15 further comprising the step of forming each horizontal support in a G-shape

17. The method of claim 16 further comprising the step of offsetting rearwardly each horizontal support from the horizontal support immediately therebelow.

18. The method of claim 17, wherein the sheet of plastic is a sheet of PETG with a thickness in the range of .020 to .200 inches.